## UTILITY PATENT APPLICATION

| PTO/SB/05 (05-03)  Approved for use through 04/30/2003. OMB 0651-0032  U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE  Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. |                        |           |          |                                 |  |  |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------|----------|---------------------------------|--|--|--|--|
|                                                                                                                                                                                                                                                                                                   | Attorne                | ey Docket | No.      | 8733.488.10-US                  |  |  |  |  |
| UTILITY                                                                                                                                                                                                                                                                                           | First Inventor Soo     |           | Soo      | Kil KIM et al.                  |  |  |  |  |
| PATENT APPLICATION                                                                                                                                                                                                                                                                                | METHOD FOR             |           |          | OR FORMING THIN FILM AND        |  |  |  |  |
| TRANSMITTAL                                                                                                                                                                                                                                                                                       |                        |           |          | OR FABRICATING LIQUID CRYSTAL O |  |  |  |  |
| (Only for new nonprovisional applications under 37 CFR 1.53(b))                                                                                                                                                                                                                                   |                        | DISPLA    | <u> </u> | SING THE SAME                   |  |  |  |  |
|                                                                                                                                                                                                                                                                                                   | Express Mail Label No. |           |          |                                 |  |  |  |  |

| TRANS                                                                                                                                                                                                                                                                                             | MITTAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Title                                  |                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|
| (Only for new nonprovisional ap                                                                                                                                                                                                                                                                   | oplications under 37 CFR 1.53(b)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                        | DISPLAY USING THE SAME                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                   | <del></del>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | - LAPIO                                |                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                   | TION ELEMENTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | contents.                              | MS Patent Application Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450                                                                                                                                                                                                                                                                                                          |  |  |  |  |  |
| 2. Applicant claims sma<br>See 37 CFR 1.27 3. X Specification  (preferred arrangement - Descriptive title of th - Cross Reference to - Statement Regardin - Reference to seque or a computer prog - Background of the l - Brief Summary of th                                                     | duplicate for fee processing) all entity status.  [Total Pages] set forth below) the invention Related Applications to gred sponsored R & D the ince listing, a table, that is the processing appendix the newtion the invention to the processing of the processing appendix the processing of the processing of the processing appendix the processing of the pr | 16 ]1                                  | 7. CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)  8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)  a. Computer Readable Form (CRF)  b. Specification Sequence Listing on:  i. CD-ROM or CD-R (2 copies); or ii. Paper  c. Statements verifying identity of above copies  ACCOMPANYING APPLICATIONS PARTS                           |  |  |  |  |  |
| - Brief Description of - Detailed Description - Claim(s) - Abstract of the Discl                                                                                                                                                                                                                  | osure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 7 1                                    | 9. X Assignment Papers (cover sheet & document(s))  10. 37 CFR 3.73(b) Statement Power of Attorney  11. English Translation Document (if applicable)                                                                                                                                                                                                                                            |  |  |  |  |  |
| Oath or Declaration                                                                                                                                                                                                                                                                               | [Total Sheets                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 3 1                                    | 12. X Information Disclosure Copies of IDS Statement (IDS)/PTO-1449 Citations                                                                                                                                                                                                                                                                                                                   |  |  |  |  |  |
| a. Newly executed (original or copy)                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                        | 13. X Preliminary Amendment                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |  |  |
| b. X Copy from a prior application (37 CFR 1.63(d)) (for continuation/divisional with Box 18 completed)  i. DELETION OF INVENTOR(S) Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).  6. Application Data Sheet. See 37 CFR 1.76 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                        | 14. X Return Receipt Postcard (MPEP 503) (Should be specifically itemized) 15. Certified Copy of Priority Document(s) (if toreign priority is claimed) 16. Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent. 17. X Other: Check for \$770.00 Copies of Req. for Priority with front pg. of Korean Priority Appln. No. 2000-67200 |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                        | oply the requisite information below and in the first sentence of the specification                                                                                                                                                                                                                                                                                                             |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | CFR 1.76;<br>ion-in-part (<br>hha S. F | 33,333,612                                                                                                                                                                                                                                                                                                                                                                                      |  |  |  |  |  |
| under Box 5b, is considered a                                                                                                                                                                                                                                                                     | part of the disclosure of the a                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ccompanyin                             | are of the prior application, from which an oath or declaration is supplied<br>ing continuation or divisional application and is hereby incorporated by<br>as been inadvertently omitted from the submitted application parts.                                                                                                                                                                  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                   | 19. C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ORRESPO                                | ONDENCE ADDRESS                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |
| Customer Number or                                                                                                                                                                                                                                                                                | Bar Code Label                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                        | or X Correspondence address below                                                                                                                                                                                                                                                                                                                                                               |  |  |  |  |  |
| Name MCKEN<br>Song K                                                                                                                                                                                                                                                                              | INA LONG & ALDRID<br>Jung                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | GE LLP                                 | P                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |  |  |
| Address 1900 K                                                                                                                                                                                                                                                                                    | Street, N.W.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                        |                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |
| City Washin                                                                                                                                                                                                                                                                                       | gton                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | State                                  | DC Zip Code 20006                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |  |  |
| Country US                                                                                                                                                                                                                                                                                        | ·                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Telephone                              | (202) 496-7500 Fax (202) 496-7756                                                                                                                                                                                                                                                                                                                                                               |  |  |  |  |  |
| Name (Print/Type)                                                                                                                                                                                                                                                                                 | Rebecca Goldman Ru                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | dich                                   | Registration No. (Attorney/Agent) 41,786                                                                                                                                                                                                                                                                                                                                                        |  |  |  |  |  |
| Signature                                                                                                                                                                                                                                                                                         | Stones Mon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | mai                                    | Date February 5, 2004                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |  |  |

|         |              |                 |          | ,                        |           | ()               |  |
|---------|--------------|-----------------|----------|--------------------------|-----------|------------------|--|
| Name    | (Print/Type) | Rebecca Goldmar | n Rudich | Registration No. (Attorn | ey/Agent) | 41,786           |  |
| Signatu | ıre 🤇        | Lobecce S       | lanas    | Pdich-                   | Date      | February 5, 2004 |  |
|         |              | 7               |          | -                        |           |                  |  |

Signature

Date

February 5, 2004

PTO/SB/17 (05-03)

Approved for use through 04/30/2003. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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| FEE TO ANOMITT AL                                                    |                           | Compl t if Known      |              |             |                                                                                 |                  |  |  |
|----------------------------------------------------------------------|---------------------------|-----------------------|--------------|-------------|---------------------------------------------------------------------------------|------------------|--|--|
| FEE TRANSMITTAL                                                      | Application Number        |                       |              |             | per TBA                                                                         | TBA              |  |  |
| for FY 2003                                                          |                           | Filing Date           |              |             | February 5, 2004                                                                |                  |  |  |
| Effective 01/01/2003, Patent fees are subject to annual revision.    |                           | First Named Inventor  |              |             | ntor Soo Kil KIM et al.                                                         |                  |  |  |
| Effective 01/01/2003, Patent fees are subject to affind fevision.    |                           | Examiner Name         |              | ame         | Not Yet Assigned                                                                | Not Yet Assigned |  |  |
| Applicant claims small entity status. See 37 CFR 1.27                |                           | Art Unit              |              |             | N/A                                                                             |                  |  |  |
| TOTAL AMOUNT OF PAYMENT (\$) 770.00                                  |                           | Attorr                | ey Do        | cket N      | o. 8733.488.10-US                                                               |                  |  |  |
| METHOD OF PAYMENT (check all that apply)                             |                           |                       |              | FEE         | E CALCULATION (continued)                                                       | =                |  |  |
| Chack Credit Money Other None                                        | 3. ADDITIONAL FEES        |                       |              |             |                                                                                 |                  |  |  |
|                                                                      | 3. ADDITIONAL PLES        |                       |              |             |                                                                                 |                  |  |  |
| Deposit Account                                                      | Large Entity Small Entity |                       |              |             |                                                                                 |                  |  |  |
| Deposit Account 50-0911                                              | Fee                       | Fee                   | Fee          | Fee         | Fee Description                                                                 |                  |  |  |
| Number                                                               | Code                      | (\$)                  | Code         | (\$)        | Fee Pa                                                                          | id               |  |  |
| Deposit Account McKenna Long & Aldridge LLP                          | 1051                      | 130                   | 2051         | 65          | Surcharge – late filing fee or oath                                             |                  |  |  |
| Name The Director is hereby authorized to: (check all that apply)    | 1052                      | 50                    | 2052         | 25          | Surcharge – late provisional filing fee or cover sheet.                         |                  |  |  |
| Charge fee(s) indicated below X Credit any overpayments              | 1053                      | 130                   | 1053         | 130         | Non-English specification                                                       |                  |  |  |
| Charge any additional fee(s) during the pendency of this application | 1812                      | 2,520                 | 1812         | 2,520       | For filing a request for ex parte reexamination                                 |                  |  |  |
| Charge fee(s) indicated below, except for the filing fee             | 1804                      | 920*                  | 1804         | 920°        | Requesting publication of SIR prior to Examiner action                          |                  |  |  |
| to the above-identified deposit account.                             | 1805                      | 1,840*                | 1805         | 1,840*      | Day and a subject of CID and                                                    |                  |  |  |
| FEE CALCULATION                                                      | 1251                      | 110                   | 2251         | 55          | Extension for reply within first month                                          | _                |  |  |
| 1. BASIC FILING FEE                                                  | 1252                      | 410                   | 2252         | 205         | Extension for reply within second month                                         |                  |  |  |
| Large Entity Small Entity                                            | 1253                      | 930                   | 2253         | 465         | Extension for reply within third month                                          |                  |  |  |
| Fee Fee Fee Fee Fee Fee Description Fee Paid Code (\$) Code (\$)     | 1254                      | 1,450                 | 2254         | 725         | Extension for reply within fourth month                                         |                  |  |  |
| 1001 770 2001 385 Utility filing fee 770.00                          | 1255                      | 1,970                 | 2255         | 985         | Extension for reply within fifth month                                          |                  |  |  |
| 1002 340 2002 170 Design filing fee                                  | 1401                      | 320                   | 2401         | 160         | Notice of Appeal                                                                |                  |  |  |
| 1003 530 2003 265 Plant filing fee                                   | 1402                      | 320                   | 2402         | 160         | Filing a brief in support of an appeal                                          |                  |  |  |
| 1004 770 2004 385 Reissue filing fee                                 | 1403                      | 280                   | 2403         | 140         | Request for oral hearing                                                        |                  |  |  |
| 1005 160 2005 80 Provisional filing fee                              | 1451<br>1452              | 1,510<br>110          | 1451<br>2452 | 1,510<br>55 | Petition to institute a public use proceeding Petition to revive – unavoidable  |                  |  |  |
| SUBTOTAL (1) (\$) 770.00                                             | 1453                      | 1,300                 | 2452         | 650         | Petition to revive - unintentional                                              |                  |  |  |
| 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE                          | 1501                      | 1,300                 | 2501         | 650         | Utility issue fee (or reissue)                                                  | _                |  |  |
| Extra Fee from                                                       | 1502                      | 470                   | 2502         | 235         | Design issue fee                                                                | _                |  |  |
| Claims   below   Fee Paid                                            | 1503                      | 630                   | 2503         | 315         | Plant issue fee                                                                 |                  |  |  |
| Independent 1 3** = 0 × 86.00 = 0.00                                 | 1460                      | 130                   | 1460         | 130         | Petitions to the Commissioner                                                   | _                |  |  |
| Claims Unitiple Dependent =                                          | 1807                      | 50                    | 1807         | 50          | Processing fee under 37 CFR 1.17(g)                                             | _                |  |  |
|                                                                      | 1806                      | 180                   | 1806         | 180         | Submission of Information Disclosure Stmt                                       | _                |  |  |
| Fee                              | 8021                      | 40                    | 8021         | 40          | Recording each patent assignment per                                            | _                |  |  |
| Code (\$) Code (\$) Fee Description                                  |                           |                       |              |             | property (times number of properties) Filing a submission after final rejection |                  |  |  |
| 1202                                                                 | 1809                      | 750                   | 2809         | 375         | (37 ČFR 1.129(a))                                                               |                  |  |  |
| 1203 290 2203 145 Multiple dependent claim, if not paid              | 1810                      | 750                   | 2810         | 375         | For each additional invention to be examined (37CFR 1.129(b))                   |                  |  |  |
| 1204 86 2204 43 ** Reissue independent claims over original patent   | 1801                      | 750                   | 2801         | 375         | Request for Continued Examination (RCE)                                         |                  |  |  |
| 1205 18 2205 9 ** Reissue claims in excess of 20                     | 1802                      | 900                   | 1802         | 900         | Request for expedited examination of a design application                       |                  |  |  |
| and over original patent                                             | Other                     | fee (spe              | cify)        |             |                                                                                 |                  |  |  |
| SUBTOTAL (2) (\$) 0.00                                               | *Red                      | uced by               | Basic F      | iling Fee   | e Paid SUBTOTAL (3) (\$)                                                        |                  |  |  |
| **or number previously paid, if greater; For Reissues, see above     |                           |                       |              |             |                                                                                 |                  |  |  |
| SUBMITTED BY                                                         |                           |                       | -            |             | Complete (if applicable)                                                        |                  |  |  |
| Name (Print/Type) Rebecca Goldman Rudich                             |                           | tration N<br>ey/Agent |              | ,786        | Telephone (202) 496-7463                                                        |                  |  |  |
|                                                                      | _                         | <del></del>           |              |             |                                                                                 | _                |  |  |